

Title (en)

Imposed weight matrix error diffusion halftoning of image data

Title (de)

Bilddatenhalbtonrasterung durch Fehlerdiffusion gemäss einer definierten Gewichtenmatrix

Title (fr)

Obtention de demi-teintes de données d'images par la diffusion d'erreurs à matrice de poids imposée

Publication

EP 0622950 B1 19990113 (EN)

Application

EP 94302983 A 19940426

Priority

US 5562893 A 19930430

Abstract (en)

[origin: US5313287A] Methods are disclosed for improving output image quality and reducing processing time in digital halftoning systems. The direction of processing each scan line of a source image is selected with blue noise, rather than the traditional raster scan sequence, to reduce directional and start-up anomalies. Source image pixel gray values are adjusted by means of imposed matrices, prior to error diffusion, in order to minimize distracting patterns and other anomalies in the output image. Error diffusion threshold values are modulated with blue noise, and the average threshold value reduced to reduce start-up delay. Finally, error terms in the error diffusion process are diffused according to a new three-weight filter. The three-weight filter substantially reduces error diffusion processing time, without sacrificing output image quality when used in combination with the modulated error diffusion threshold values.

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H04N 1/40

IPC 8 full level

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CPC (source: EP US)

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Cited by

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